



U.S. House of Representatives
Committee on Transportation and Infrastructure

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SUMMARY OF SUBJECT MATTER

TO: Members of the Committee on Transportation and Infrastructure

FROM: Subcommittee on Water Resources and Environment Staff

SUBJECT: Hearing on "The 35th Anniversary of the Clean Water Act: Successes and Future Challenges"

PURPOSE OF HEARING

On Thursday, October 18, 2007, the Committee on Transportation and Infrastructure will hold a hearing to commemorate the 35th anniversary of the Federal Water Pollution Control Act Amendments of 1972, more commonly referred to as the Clean Water Act. The Committee will hear testimony from representatives of Federal, state, and local governments, industry, construction utilities, and nongovernmental organizations.

HISTORY OF CLEAN WATER LEGISLATION (PRE-1972)

The historical underpinnings of the Clean Water Act of 1972 can be traced back to the late 1800s, when Congress established the initial use-based restrictions on U.S. waters, focusing on preventing obstructions to navigation, including the disposal and transportation of waste.

Federal efforts to address water pollution are first recognizable in the Rivers and Harbors Appropriations Act of 1890, which required approval from the Secretary of War for the construction of bridges, bridge piers, and abutments, and other works over navigable waterways of the United States. It also prohibited the placement of fill or other obstructions to navigation in navigable channels without the permission of the Secretary.

The Rivers and Harbors Appropriation Act of 1899 built off these early ideas, requiring Congressional approval for the construction of any bridge, dam, dike, causeway, wharf, pier, or other such structures that may impact navigation. It allowed State legislatures to authorize the construction of bridges, dams, dikes, and causeways with the approval of the Chief of Engineers and

the Secretary of the Army so long as the navigable water in which the structure would be built was entirely within that state. Section 13 of this Act, commonly referred to as the Refuse Act of 1899, prohibited the discharge of "any refuse matter of any kind or description whatever other than that flowing from streets and sewers and passing therefrom in a liquid state, into any navigable water of the United States, or into any tributary of any navigable water from which the same shall float or be washed into such navigable water."

The first widespread statement of Federal interest in addressing water quality concerns can be seen in the Water Pollution Control Act of 1948. It established a five-year grants program to defray local governments' costs in planning and designing wastewater treatment facilities, while also supporting research on water pollution control. The 1948 Act maintained the primacy of State responsibilities for water quality, but gave authority to the Federal Government to investigate and prosecute interstate pollution problems.

During the latter half of the 1950s and well into the 1960s, water pollution control programs were shaped by four laws which amended the 1948 statute. They dealt largely with Federal assistance to municipal dischargers and with Federal enforcement programs for all dischargers. During this period, the Federal interest and understanding of the nation's waters shifted from utilizing water for the movement of goods, services, and wastes to the protection of water for both public health purposes and for the protection of the water-related environment.

With the enactment of the Federal Water Pollution Control Act of 1956, Congress, for the first time, authorized Federal grants for the construction of wastewater treatment facilities. In doing so, it also maintained existing State responsibilities for water pollution concerns. The House Report from the Committee on Public Works (the predecessor to the Committee on Transportation and Infrastructure) stated that "The bill...reemphasizes the policy of Congress to recognize, preserve, and protect the primary rights and responsibilities of the States controlling water pollution.... Regulatory authority at the Federal level should be limited to interstate pollution problems and used on a standby basis only for serious situations and which are not resolved through State and interstate collaboration."

The Water Pollution Control Act was again amended in 1961, 1965, 1966, and 1970, further shaping water pollution control programs in the country. Water quality standards became a feature of the law in 1965, requiring states to set standards for interstate waters that would be used to determine actual pollution levels and control requirements. However, because the Water Pollution Control Act primarily remained a state-based program, these water quality standards lacked national consistency.

IMPETUS FOR CHANGE

By the late 1960s, there was a widespread perception that existing enforcement procedures were too time-consuming and that the water quality standards approach was flawed because of difficulties in linking a particular discharger to violations of stream quality standards. In addition, there was mounting frustration over the slow pace of pollution cleanup efforts and a suspicion that control technologies were being developed but not applied to the problems. These perceptions and frustrations, along with increased public interest in environmental protection, set the stage for the 1972 amendments.

Current events were raising the pressure on lawmakers to enact more effective legislation. Although the economy was strong, many believed that degraded air and water quality could begin to decrease quality of life. The list of events and statistics that made headlines at the time can become lengthy, but the following include the more-often cited:

- On June 22, 1969, the Cuyahoga River in Cleveland, Ohio, caught fire; the flames were fueled by oil and other industrial chemicals and waste that polluted the water.
- Due to severe levels of phosphorous in the water that produced algal blooms, Lake Erie was pronounced “dead” by experts and scientists. Eutrophication was robbing the Lake’s waters of oxygen, resulting in massive fish kills.
- The Hudson River contained bacteria levels 170 times what was considered safe.
- A 1968 survey concluded that pollution in the Chesapeake Bay caused \$3 million in losses to the fishing industry, and an economist at the Federal Water Quality Administration estimated that water pollution cost the nation \$12.8 billion a year.

As a result of the growing evidence of the degradation of the nation’s waters, both the Nixon administration and Congress began to explore an enhanced water pollution control policy, including the creation of Federal permitting programs. Although President Nixon’s Refuse Act Permit Program was later struck down by the Federal District Court in Ohio for failing to comply with the National Environmental Policy Act of 1970, Congress continued to pursue an enhanced Federal role in water pollution control efforts, including the use of permits for discharges into the nation’s waters.

The sluggish pace of pollution cleanup, as well as the increased environmental awareness surrounding events such as the first Earth Day on April 22, 1970, and Ralph Nader’s 1971 report on the state of the country’s waters, led to increased public interest in the environment and set momentum for the 1972 amendments.

CLEAN WATER ACT OF 1972

On October 18, 1972, Congress overrode President Nixon’s veto to pass the Federal Water Pollution Control Act Amendments of 1972. Although the 1972 Amendments technically modified existing law, they marked a clear delineation from the previous law by establishing national technology-based standards, enforceable permits, and an increase in Federal assistance for municipal treatment plant construction.

In Title I, the Act states: “The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Central to the 1972 Amendments is a national program that is implemented through Federal-state partnerships. Under this framework, states may assume regulatory authority for water pollution prevention programs, provided that, at a minimum, they adopt uniform Federal standards. Individual state programs may adopt more stringent requirements to meet local water quality concerns.

The Clean Water Act identified two *national* goals: that the discharge of pollutants into navigable waters be eliminated by 1985, and that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983 (also known as "swimmable and fishable waters").

In this regard, the Clean Water Act has two large areas of emphasis. The first area of emphasis centers on regulatory provisions that impose progressively more stringent technology-based (or water quality-based) requirements on industries and municipalities to reduce or eliminate the discharge of pollutants, and that regulate the discharge of dredged or fill materials into wetlands. The second area focuses on funding provisions that authorize Federal financial assistance for municipal wastewater treatment plan construction. Planning and financial and technical assistance for various regions and issues are also addressed.

National Pollutant Discharge Elimination System ("NPDES")

Industries must meet technology-based standards based on the type of pollutant discharged and the age of the facility (e.g., "best available technology achievable"). For municipalities, secondary treatment (defined in regulation as an 85 percent reduction in certain conventional pollutant concentrations as well as maintaining pH levels within a certain range) must be achieved. Additional limitations may also be imposed on dischargers where pollution levels in receiving waters continue to be too high to protect the receiving water's designated uses; this is accomplished through water quality-based effluent limitations.

The Environmental Protection Agency ("EPA") is responsible for defining what the required level of treatment is for municipalities and for each type of industry to meet its standards. EPA also must develop water quality criteria, specifying the maximum concentrations of pollutants permitted for different designated uses of waters.

These requirements are implemented and enforced through permits. All point source dischargers that discharge pollutants directly into jurisdictional waters must obtain a permit for that discharge either from EPA or a state, if the state has an EPA-approved permitting program. Permits are based on both technology requirements and water quality impacts, and set the concentration and amount of pollutants allowed to be discharged.

A state may implement its own permit program in lieu of the Federal program if it meets specified requirements and EPA approval of the state's program. For example, the Clean Water Act authorizes a state to establish water quality standards for its waters. Water quality standards consist of a designated use for a body of water, such as fishable and swimmable, suitable for spawning, or drinking water source; criteria for the amounts of various pollutants which will protect and sustain that use; and a policy to prevent or minimize degradation of water quality. For water bodies not meeting water quality standards following implementation of technology-based controls, more stringent ("water quality-based") limitations on dischargers may be imposed in order to protect the quality of the receiving waters.

Indirect dischargers, those that discharge to publicly owned treatment works ("POTWs") rather than directly into waters, must meet pre-treatment standards similar to those established for direct industrial discharges because POTWs traditionally are designed primarily for the treatment of

domestic sewage. Pretreatment requirements are either enforced by the POTW or by state or Federal authorities.

The Clean Water Act also establishes a program for regulating stormwater dischargers and regulates discharges from concentrated animal feeding operations (“CAFOs”). The law includes several enforcement provisions, authorizing administrative, civil, and criminal penalties, as well as citizen suits.

Section 319 of the Act provides Federal financial assistance, in the form of grants, to encourage and assist states in the control of nonpoint sources of water pollution. The provision requires states to identify areas not meeting water quality standards because of nonpoint sources of pollution and to develop programs, as necessary, if states are to receive implementation grants. Notwithstanding the expiration of the authorization for grants, the nonpoint source program has continued to receive appropriations for state implementation efforts.

Wastewater Infrastructure Financing

Titles II and VI of the Clean Water Act provide authority for grants to States and municipalities and the establishment of clean water state revolving loan funds, respectively, for the construction of treatment works. The Construction Grants program contained in Title II was phased out in favor of state revolving loan funds in the Water Quality Act of 1987 (PL 100-4). For the Construction Grants program, Congress appropriated approximately \$60 billion over the life of the program.

The Clean Water State Revolving Fund (“CWSRF”) was authorized in the Water Quality Act of 1987. Through the CWSRF program, each state and Puerto Rico maintain revolving loan funds to provide low-cost financing for approved water quality infrastructure projects. Funds to establish or capitalize the CWSRF programs are provided through federal capitalization grants and state matching funds (equal to 20 percent of Federal Government grants). SRFs are available to make low-interest loans, buy or refinance local debt, subsidize or insure local bonds, make loan guarantees, act as security or guarantee of state debt, earn interest, and pay administrative expenses. SRF monies also may be used to implement other water pollution control programs such as nonpoint source pollution management and the national estuary program. EPA, the Congressional Budget Office, and a coalition of industry and other interested stakeholders, have all estimated that significant increases in investments are needed to address wastewater needs over the next 20 years.

Other Authorities

The Clean Water Act contains several targeted programs and authorities that were designed to improve water quality throughout the country.

The National Estuary Program authorizes Federal financing for the development and implementation of comprehensive conservation and management plans for improving the overall ecological health of the nation’s estuaries.

The Clean Lakes Program, established under section 314, authorizes financial and technical assistance to States in restoring publicly-owned lakes.

In addition, the Act authorizes several targeted programs for improving regional water quality in the areas of the Chesapeake Bay, Great Lakes, Long Island Sound, Lake Champlain, Lake Pontchartrain Basin, and for the management of wet weather discharges and stormwater best management practices.

SUCCESSSES AND FUTURE CHALLENGES

The successes and future challenges of the Clean Water Act can be succinctly stated. In 1972, only one-third of the nation's waters met water quality goals. Today, while two-thirds of those waters do meet water quality goals, one-third still remain impaired.

Much of the success of the Clean Water Act can be attributed to the increased number of municipal sewage treatment plants constructed to address point source pollution. From 1972 to 1989, the Federal Government invested \$56 billion in construction of these systems, with total federal, state, and local expenditures reaching more than \$128 billion. The percentage of the United States population served by wastewater treatment plants has jumped from 42 percent in 1970 to 74 percent by 1985. Industrial point sources also have substantially reduced pollution under the Clean Water Act's pollution control programs further improving water quality across the nation.

However, future challenges remain. First, according to EPA's 1996 Clean Water Needs Survey, small communities will need \$13.6 billion within the next nine years to meet Clean Water Act requirements. This funding would help finance construction of 21,000 wastewater treatment plants to meet the requirements of the Act. Specifically, 60 percent of the nation's total small community needs are located in 10 states (Illinois, Indiana, Ohio, Pennsylvania, North Carolina, New York, Texas, Virginia, Wisconsin, and West Virginia).

In addition, nonpoint sources of pollution continue to be identified as a leading source of impairment to the nation's rivers, streams, and lakes. Nonpoint source pollution comes from diffuse sources, rather than a more distinct point source like a discharge pipe. Nonpoint pollution sources include agricultural and urban runoff, silviculture, and construction, transportation, and recreational activities.

Examples of nonpoint pollutants include sediment and nutrients, toxic contaminants (such as heavy metals, chemicals, and pesticides), airborne inputs, and pathogens from organic waste. The pollution can run off the land and affect water quality in lakes, rivers, and wetlands, as well as groundwater and drinking water supplies.

The Act does not formally regulate nonpoint sources of pollution, but provides financial incentives to encourage states to address and control these sources of pollution. In 1992, the EPA found that out of ten sample state programs, the majority did not have nonpoint source programs oriented toward improving water quality on a state-specific basis. Although state-to-state variation is expected, the total report "suggests the need for more program focus at both the federal and state levels."

Finally, there are ongoing questions regarding the jurisdictional scope of the Clean Water Act following two U.S. Supreme Court decisions, *Solid Waste Agency of Northern Cook County v. Corps*

of Engineers (“SWANCC”) (2001) and *Rapanos et ux., et al. v. United State* (“*Rapanos*”) (2006). These decisions have created uncertainty over which waters are afforded Federal protection under the Act.

COMMITTEE ACTION IN THE 110TH CONGRESS

The Subcommittee on Water Resources and Environment and the Committee on Transportation and Infrastructure have addressed several Clean Water Act issues during the 1st Session of the 110th Congress.

On January 31, 2007, the Subcommittee marked up H.R. 700, the Healthy Communities Water Supply Act of 2007; H.R. 569, the Water Quality Investment Act of 2007; and H.R. 720, the Water Quality Financing Act of 2007. These three bills were then marked up by the Full Committee on February 7, 2007. On March 7, the House passed H.R. 569. On March 8, the House passed H.R. 700. On March 9, the House passed H.R. 720. The three bills authorize almost \$16 billion for wastewater infrastructure over the next four years. All three bills await Senate action.

On April 17, 2007 and April 19, 2007, the Subcommittee conducted a two-part hearing on nonpoint source pollution, the first entitled “Atmospheric Deposition and Water Quality” and the second entitled “The Impact of Agriculture on Water Quality”.

On July 17, 2007 and July 19, 2007, the Subcommittee conducted a two-part hearing entitled “Status of the Nation’s Waters, including Wetlands, Under the Jurisdiction of the Federal Water Pollution Control Act.”